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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,213	02/13/2002	Takeshi Nagashima	46275	4799
20736 7590 11/26/2007 MANELLI DENISON & SELTER 2000 M STREET NW SUITE 700 WASHINGTON, DC 20036-3307			EXAMINER SHEWAREGED, BETELHEM	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 11/26/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/073,213

Applicant(s)

NAGASHIMA ET AL.

Examiner

Betelhem Shewareged

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11,13-16 and 18-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-16 and 18-33 is/are allowed.
- 6) ☒ Claim(s) 1,3,7-11 and 13 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's response filed on 09/07/2007 has been fully considered. Claim 1 is amended, claims 2, 12 and 17 are canceled, and claims 1, 3-11, 13-16 and 18-33 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 7-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (US 6,096,469) in view of Sugiyama et al. (JP 11-208099).

4. Anderson discloses an ink jet receptor media having a substrate and an ink receptor media on the substrate (abstract). The substrate is a polyester polymeric film (col. 10, line 38). The ink receptor media comprises particles (col. 4, line 39) and hydrophilic binder such as polyvinyl alcohol (col. 9, line 25). For applications in which transparency is desired, the particles have a mean particle size of about 10 to less than 50 nm (col. 6, line 66). The particles can be formed from fumed silica (col. 5, line 15), or the particles can be silica prepared by wet process and comprise silane group (col. 7, lines 6-49). The ratio of particles to binder ranges from 1:9 to 9:1 (col. 9, line 39). The ink receptor media may be coated on both sides of the substrate (col. 11, line 6), and

the ink receptor media coated on the backside of the substrate is equivalent to the claimed back-coating layer. With respect to void ratio value it is elementary that the mere recitation of newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. *In re swinehart et al.*, 169 USPQ 226 at 229. Since the Anderson reference teaches all of Applicant's claimed compositional and positional limitations, it is inherent that the reference article function in the same manner claimed by Applicant. The burden is upon Applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

5. Anderson further teaches that the ink receptor media comprises cationic polymers that are pigment particles (col. 9, lines 62-65). However, Anderson fails to disclose the particle size of the cationic polymer particles. The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the particle size in order to optimize the ink fixing property of the layer. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

6. Anderson does not expressly disclose the solid content of the ink receptor media applied on either side of the substrate. The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims

patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the solid content of the receptor media applied on either side of the substrate in order to optimize curling and ink-absorbing properties of the layer. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

7. Anderson does not disclose the opacity of the substrate.
8. Sugiyama teaches an ink jet recording sheet comprising a carrier and an ink receptor layer on the carrier (abstract). The carrier comprises a resin film containing inorganic pigments ([0008] and [0010]), wherein the opacity of the carrier is 60% or less measured employing a method specified in JIS-P-8138 ([0011] and [0035]).
9. Anderson and Sugiyama are analogous art because they are from the same field of endeavor that is the ink jet recording material art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the carrier of Sugiyama with the invention of Anderson in order to provide a recording material which provides a clear image by controlling the reflection of light of the support (see [0011] of Sugiyama).
10. With respect to claim 13, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to obtain a blue film by adding a blue color while the film is being processed. Changing a color of a film by adding a color pigment is notoriously known in the art.

Response to Arguments

11. Applicant's arguments is based on that Anderson or the combination of the references does not teach that the ink receptor media comprises fumed silica particles, and the ratio of particles to binder meets the claimed range. This argument is not persuasive because the reference of Anderson expressly teaches that the ink receptor media comprises particles that can be formed from fumed silica, and the ratio of particles to binder ranges from 1:9 to 9:1, wherein this range meets the claimed range (col. 5, line 15 and col. 9, line 39).

12. Claims 1, 3, 7-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (US 6,096,469) in view of Sugiyama et al. (JP 11-208099) and Kitamura et al. (US 2001/0016249 A1).

13. Anderson discloses an ink jet receptor media having a substrate and an ink receptor media on the substrate (abstract). The substrate is a polyester polymeric film (col. 10, line 38). The ink receptor media comprises particles (col. 4, line 39) and hydrophilic binder such as polyvinyl alcohol (col. 9, line 25). For applications in which transparency is desired, the particles have a mean particle size of about 10 to less than 50 nm (col. 6, line 66). The particles can be formed from fumed silica (col. 5, line 15), or the particles can be silica prepare by wet process and comprise silane group (col. 7, lines 6-49). The ratio of particles to binder ranges from 1:9 to 9:1 (col. 9, line 39). The ink receptor media may be coated on both sides of the substrate (col. 11, line 6), and

the ink receptor media coated on the backside of the substrate is equivalent to the claimed back-coating layer.

14. Anderson does not teach that the particles in the ink receptor media can be alumina or alumina hydrate. However, Kitamura teaches an ink jet recording material comprising a substrate and at least one ink receiving layer (abstract), wherein the ink receiving layer contains alumina, alumina hydrate or fumed silica. Anderson and Kitamura are analogous art because they are from the same field of endeavor that is the ink jet recording medium art. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the alumina, alumina hydrate or fumed silica of Kitamura with the invention of Anderson, and the motivation would be, as Kitamura suggests, enhancing glossiness, smoothness, color forming property, image sharpness and brightness [0089].

15. The Office realizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties, i.e. a void ratio value would implicitly be achieved by a composite with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

16. Anderson further teaches that the ink receptor media comprises cationic polymers that are pigment particles (col. 9, lines 62-65). However, Anderson fails to

disclose the particle size of the cationic polymer particles. The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the particle size in order to optimize the ink fixing property of the layer. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

17. Anderson does not expressly disclose the solid content of the ink receptor media applied on either side of the substrate. The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the solid content of the receptor media applied on either side of the substrate in order to optimize curling and ink-absorbing properties of the layer. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

18. Anderson does not disclose the opacity of the substrate.

19. Sugiyama teaches an ink jet recording sheet comprising a carrier and an ink receptor layer on the carrier (abstract). The carrier comprises a resin film containing inorganic pigments ([0008] and [0010]), wherein the opacity of the carrier is 60% or less measured employing a method specified in JIS-P-8138 ([0011] and [0035]).

20. Anderson and Sugiyama are analogous art because they are from the same field of endeavor that is the ink jet recording material art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the carrier of Sugiyama with the invention of Anderson in order to provide a recording material which provides a clear image by controlling the reflection of light of the support (see [0011] of Sugiyama).

21. With respect to claim 13, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to obtain a blue film by adding a blue color while the film is been processed. Changing a color of a film by adding a color pigment is notoriously known in the art.

Response to Arguments

22. The above combination of the references does teach that the ink receptor media comprises alumina, alumina hydrate and fumed silica, and Anderson expressly teaches the claimed ratio of particles to binder ranging from 1:9 to 9:1.

Allowable Subject Matter

23. Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

24. Claims 14-16 and 18-33 are allowed over the above prior arts.

25. The combination of Anderson, Sugiyama and Kitamura neither teaches nor suggests having two ink receptor media of outermost ink receptor media and innermost

ink receptor media, wherein the outermost media comprising alumina or alumina hydrate having the claimed particle size and the innermost media comprising fumed silica having the claimed particle size. In fact Kitamura teaches the ink receiving inside layer comprises silica gel, not fumed silica.

Conclusion

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


27. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 571-272-1529. The examiner can normally be reached on Mon.-Fri. 8:00AM-4:30PM.

29. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

30. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BS
November 21, 2007.



BETELHEM SHEWAREGED
PRIMARY EXAMINER